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Michael L Goldman
Nixon Peabody LLP
Clinton Square
PO Box 31051
Rochester, NY 14603

EXAMINER

MCDERMOTT, KEVIN

ART UNIT

PAPER NUMBER

3635

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/673,001

Applicant(s)

KROIE, ROBERT

Examiner

McDermott, Kevin

Art Unit

3635

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12, 14-16 and 19-31 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-12, 14-16, 19 and 26-31 is/are rejected.
- 7) ☒ Claim(s) 8 and 21-25 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

On December 12, 2002, an Advisory Action was mistakenly mailed for this application. Because the action prior to the Advisory was not a Final Rejection, an Advisory Action was not proper. The claims are rejected again as detailed below.

Claim Objections

Claims 2 and 27 are objected to because of the following informalities:

Claim 2, line 5 recites "the said". Please use either "the" or "said", but not both.

Claim 27, line 4 recites "the or each abutment surface". Please use either "the" or "each", but not both.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 2, 4, 5, 8, 9, 21, 23-25, and 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, line 3 recites "including opposite end edges". Examiner is not certain which element contains the end edges. Is it the metal sheet substrate or the core? Lines 7 and 10 recite the "end edge of said core", so Examiner interpreted the core as including the opposite end edges.

Also regarding claim 1, line 6 recites "which". Examiner is not certain what the Applicant is referring to. Examiner interpreted this as referring to the end regions of the metal sheet opposite edges.

Regarding claim 2, line 2 recites "longitudinal edge region". There is insufficient antecedent basis for this limitation in the claims.

Regarding claims 4, 8, and 9, their respective lines 2 recite "its". Additionally, claim 8, line 3 recites "its". This language is indefinite.

Regarding claim 5, a projection is inherently not a channel. How can a projection be in the form of a channel?

Regarding claim 21, line 5 recites "flat apical" portion. Examiner cannot reconcile "flat" and "apical" being used to describe the same thing. How can an apex be flat? An apex inherently implies a highest point.

Regarding claims 23 and 24, their respective lines 2 recite "its". This language is indefinite.

Regarding claims 25 and 28, their respective lines 3 recite "its". This language is indefinite.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4, and 5 as best understood, and claims 3, 6, and 10-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hesser in view of Sauer.

Hesser is directed towards a structural wall apparatus.

Regarding claims 1 and 16, Hesser discloses in figures 1, 2, 4, and 5, and in column 2, line 68, to column 4, line 27, a structural and insulated wall 10 having a plurality of panels 11 interconnected to each other. Each panel 11 has a metal skin 12 and an inner skin 13 spaced by a uniform thick insulating material 14 which may be a foamed polymer, such as a polystyrene or polyurethane rigid foam, to form a structural lightweight panel 11. Col. 4, lines 11-14 disclose the skins 12, 13 being metal. Each panel 11 has abutting attaching ends 15 and 16 with the end 15 having a metal lined tongue 17 and a metal lined groove 18 in which the metal lining continues from the inner and outer skins 13, 12. The panel end 16 has a metal lined groove 22 which exactly coincides and co-acts with the tongue 17 and has a tongue 23 which co-acts with the metal lined groove 18. Thus, when two panels 11 and 23 are connected, the tongue 17 is inserted into the groove 22 while the tongue 23 is inserted into the groove 18.

The foamed polymer is the claimed core and the skins 12, 13 the claimed metal sheet substrates. The foamed polymer has opposite major faces and end edges that extend between and are generally perpendicular to the major faces. The metal sheets 12, 13 include opposite edges that are shaped to form end regions of the panel 11. These end regions extend inboard of the core major surfaces and across each end edge of the core. Each end region contains a tongue 17, 23 and groove 18, 22. The tongues are projections and the grooves are channels.

However, Hesser does not disclose disposing a plasterboard paper covering on the skins 12, 13.

Sauer is directed towards a building construction made up of a plurality of interlocked side-by-side panels.

Sauer discloses in figures 1-3 and in column 2, lines 48-63, a rigid building panel 10 comprising spaced substantially parallel front and rear sheets 12 and 14, respectively, having there-between an insulating, rigid core element 16 bonded under pressure to the inside surface of the sheets 12 and 14. The core element 16 is formed of any suitable insulating material. Column 4, lines 16-22 disclose that the sheets 12 and 14 of the panels 10 may be formed of sheet metal and provided with pre-finished architectural faces. A plasterboard paper covering is a pre-finished architectural face.

Therefore, it is obvious to one of ordinary skill in the art at the time the invention was made to modify Hesser to dispose a plasterboard paper covering on the metal skins 12, 13.

One of ordinary skill would be motivated to make such a modification to create an aesthetically pleasing panel.

Regarding claim 2 as best understood, Hesser discloses angled insulating material surfaces 20, 21 disposed between the tongues 17, 23 and the grooves 18, 22. Material surfaces 20, 21 are abutment surfaces.

However, Hesser does not disclose the material surfaces 20, 21 being perpendicular to the major faces of the panel.

Sauer discloses an abutment at 25 that is perpendicular to the major surface of the panel.

Therefore, it is obvious to one of ordinary skill in the art at the time the invention was made to modify the material surfaces 20, 21 to be generally perpendicular to the major surfaces of panel 11.

One of ordinary skill would be motivated to make such a modification because a perpendicular surface and a skewed surface, i.e. relative to the major surfaces, are equivalent for their use in the panel art and the selection of any of these known equivalents is within the level of ordinary skill in the art. One of ordinary skill would also use a perpendicular surface to create a flush fit between panels.

Regarding claim 3, the grooves 18, 22 of Hesser are generally C-shaped in cross section incorporating opposite walls interconnected by a substantially flat base portion.

Regarding claim 4 as best understood, the opposite walls of the C-shaped channel meet the base at approximately 90 degrees.

Regarding claims 5 and 6, the tongues 17, 23 have a cross sectional area that complements the cross section of the grooves 18, 22 so that the tongues 17, 23 of one panel fit in nesting engagement with the grooves 18, 22 of an other panel.

Regarding claim 10, the disclosures of Hesser and Sauer are discussed above. However, neither Hesser nor Sauer disclose using an adhesive to secure a/the architectural finish to the metal sheets.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use any type of adhesive to secure the architectural finish to the

Art Unit: 3635

skins 12, 13, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of design choice.

One of ordinary skill would be motivated to make such a modification to secure the finish to the skins 12, 13.

Regarding claim 11, the disclosures of Hesser and Sauer are discussed above. However, neither Hesser nor Sauer specifically disclose bonding the plasterboard paper directly to the metal skins/sheets.

Sauer discloses disposing the architectural finish on the metal sheets.

Therefore, it is obvious to one of ordinary skill in the art at the time the invention was made to dispose a plasterboard paper directly on the metal skins 12, 13 of Hesser.

One of ordinary skill would be motivated to make such a modification to provide the strongest connection between the metal skin and the finish.

Regarding claim 12, even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If a product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.

Regarding claim 13, the disclosures of Hesser and Sauer are discussed above. However, neither Hesser nor Sauer disclose using an adhesive to secure a/the

Art Unit: 3635

architectural finish to the metal sheets or bonding plasterboard paper directly to the metal skins/sheets.

Sauer discloses disposing the architectural finish on the metal sheets.

Therefore, it is obvious to one of ordinary skill in the art at the time the invention was made to dispose a plasterboard paper directly on the metal skins 12, 13 of Hesser.

One of ordinary skill would be motivated to make such a modification to provide the strongest connection between the metal skin and the finish.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use any type of adhesive to secure the architectural finish to the skins 12, 13, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of design choice.

One of ordinary skill would be motivated to make such a modification to secure the finish to the skins 12, 13.

Regarding claims 14 and 15, the disclosures of Hesser and Sauer are discussed above. Additionally, as discussed above, Hesser discloses making the skins 12, 13 from metal. However, neither Hesser nor Sauer specifically disclose making the metal skins/sheets from mild steel, aluminum, tin, stainless steel, and galvanized steel, or using a gauge of between 0.3 and 1mm.

Metal as disclosed by Hesser includes mild steel, aluminum, tin, stainless steel, and galvanized steel, and includes a range of metal thicknesses.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use any of these metal materials and associated thicknesses, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of design choice. *In re Leshin*, 125 USPQ 416.

One of ordinary skill would be motivated to use one of these materials to make a safe, strong panel.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hesser in view of Sauer and further in view of Lamberet.

The disclosures of Hesser and Sauer are discussed above. However, neither Hesser nor Sauer disclose a snap fit connection between the tongue and groove in a joint connection.

Lamberet discloses in figure 2 and column 4, lines 5-26, panel tongues and grooves in an interlocking relationship at a joint between panels.

Therefore, it is obvious to one of ordinary skill in the art at the time the invention was made to modify the tongues and grooves of Hesser to include interlocking means.

One of ordinary skill would be motivated to make such a modification to temporarily hold the panels together before using the fasteners.

Claim 9 as best understood is rejected under 35 U.S.C. 103(a) as being unpatentable over Hesser in view of Sauer and further in view of Ehrlich.

The disclosures of Hesser and Sauer are discussed above. However, neither Hesser nor Sauer disclose the panel major surface having a recess adjacent the end region.

Ehrlich discloses in figure 2, panels 142a, 142b having coined or stepped down end sections 160a, 160b. The ends are stepped down so that logistics plate 152 is flush with the wall surface to form a smooth wall surface at the joints and to discourage snagging at the joints.

Therefore, it is obvious to one of ordinary skill in the art at the time the invention was made to modify the panels of Hesser to include stepped down areas adjacent the panel ends.

One of ordinary skill would be motivated to make such a modification to provide a smooth wall surface at the joints and to discourage snagging at the joints.

Claims 19, 20, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lamberet in view of Hesser.

Lamberet discloses in figures 1 and 2 and in column 3, line 54 to column 4, line 26, a profile member that defines a lateral edge of an insulating panel of the type which comprises a pair of sheet metal facing layers between which a core of synthetic resin foam can be formed by injection. The foamed core has major faces and has opposite end edges that extend between and generally perpendicular to the major faces. Each of the metal sheets has a perimeter edge that inherently define edge regions which form longitudinal edge regions of the panel. These edge regions are connected to the profile member 2 and the profile member 2 extends inwardly of the opposite major faces of the

panel and across the end edge of the foamed core to provide for interconnection of the panel with another panel. Each end region of the panel is defined by the profile member 2 which forms at least a pair of connecting elements which are disposed across the core end edges. The connecting elements are channels and projections adapted to interfit with the channels and projections of another panel.

Each of the panels are configured such that the major surfaces of the interconnected panels are aligned and in substantially abutting relationship to form a continuous surface. A metal insert 8, constituted by a flat plate, is disposed in the inwardly extending fold 7 of profile 2. Metal insert 8 is a reinforcing element that is installed at a joint formed on connection of panels and is secured in place by locating it between and in connection with the interfitting elements of each panel.

However, Lamberet does not disclose the metal sheets extending inwardly of the opposite major faces, but instead as discussed above, the metal sheets are connected to the profiles 2 that extend inwardly of the major opposite faces.

Hesser's disclosure is discussed above. As discussed, each panel 11 has abutting attaching ends 15 and 16 with the end 15 having a metal lined tongue 17 and a metal lined groove 18 in which the metal lining continues from the inner and outer skins 13, 12.

Therefore, it is obvious to one of ordinary skill in the art at the time the invention was made to modify the panels of Lamberet such that the metal sheets include the profile portion (identified by the reference number 2 in Lamberet) so that the metal sheets extend inwardly of the major surfaces of the panel.

One of ordinary skill would be motivated to make such a modification to provide a safer, stronger joint between panels.

Claims 27, 29-31 and claim 28 as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Lamberet in view of Hesser and further in view of Sauer. The disclosures of all these references are discussed above. Please see those discussions.

Regarding claim 27, Lamberet and Hesser do not disclose an abutment surface extending generally perpendicularly to the major surfaces of the panel and disposed between a major surface of the panel and the connecting elements. As discussed above, Sauer does.

Therefore, it is obvious to one of ordinary skill in the art at the time the invention was made to modify the panels of Lamberet such that an abutment surface extends generally perpendicularly to the major surfaces of the panel and is disposed between a major surface of the panel and the connecting elements.

One of ordinary skill would be motivated to make such a modification to provide a safer, stronger joint between panels.

Regarding claim 28, as best understood, Lamberet and Hesser do not disclose a paper covering being disposed along the major surface of a panel.

Sauer discloses in column 4, lines 16-22, that the sheets 12 and 14 of the panels 10 may be formed of sheet metal and provided with pre-finished architectural faces. A plasterboard paper covering is a pre-finished architectural face.

Therefore, it is obvious to one of ordinary skill in the art at the time the invention was made to dispose a paper covering along the major surface of the panel.

One of ordinary skill would be motivated to make such a modification to make the panel more aesthetically pleasing.

Regarding claim 29, the disclosures of Lamberet, Hesser and Sauer are discussed above. However, neither Lamberet, Hesser nor Sauer disclose using an adhesive to secure a/the architectural finish to the metal sheets.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use any type of adhesive to secure the architectural finish to the metal sheets, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of design choice.

One of ordinary skill would be motivated to make such a modification to secure the finish to the metal sheets.

Regarding claim 30, the disclosures of Lamberet, Hesser, and Sauer are discussed above. However, neither Lamberet nor Hesser specifically disclose bonding the plasterboard paper directly to the metal skins/sheets.

Sauer discloses disposing the architectural finish on the metal sheets.

Therefore, it is obvious to one of ordinary skill in the art at the time the invention was made to dispose a plasterboard paper directly on the metal sheets.

One of ordinary skill would be motivated to make such a modification to make the panel more aesthetically pleasing.

Regarding claim 31, even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If a product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.

Allowable Subject Matter

Claim 8 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art does not disclose and it does not appear obvious to modify the prior art to disclose a panel having a tongue and groove connection, wherein the groove includes a depression on its inner surface and the tongue includes a protuberance on its outer surface, and the protuberance snap-fits into the depression to snap fit adjacent panels together.

Claims 21-25 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art does not disclose and it does not appear obvious to modify the prior art to disclose a panel having a reinforcing element disposed between the connecting elements of adjacent panels, wherein the reinforcing element includes at least one engagement part which is U-shaped and located particularly between an interfitting channel and projection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Kevin McDermott, whose telephone number is 703-308-8266.

A handwritten signature in black ink, appearing to read 'Carl D. Friedman', with a long horizontal line extending to the right.

Carl D. Friedman
Supervisory Patent Examiner
Group 3600

KM 2/24/03